Plate for connecting the seat, back and legs, especially for chairs.

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Abstract

This invention refers to a plate (1) connecting the component parts of a chair (seat (4), back (2) and legs (5)) designed to make up the structure with great ease and replace its component parts. A plate (1) is in suitable material (aluminium, plastic or some other) to connect and support the structural elements of the chair so as to allow it to be replaced, as and when desired.

Description

This invention refers to a plate connecting the component parts of a chair (seat, back and legs) designed to make up the structure with great ease and replace its component parts. It is known that a normal chair consists of a back, a horizontal surface (with or without recesses) or seat and three or four legs or feet, joined together, or not, by cross members. Each chair has its own structure which does not permit variations of the original design. In general this is a single body that does not allow any alteration to the original shape and dimensions.

It is also known that there exist systems to tilt the back of the chair, based on joints which, in many cases, at the same time cause the seat-surface to lift when the back is in its reclining, relaxed position, and one or more compressed counteracting springs which facilitate and accompany the return of the back to the upright position. Other known systems entail the tilting forward and back, up and down, of the whole seat-back body, again using the elastic property of compensating springs which permit a gradual and adjustable movement.

The use of supports of this type which rock the chair-back forwards and back leave long been known. The aim of this invention is to permit the creation of a chair which extends the capabilities of the basic model, allowing different configurations and characteristics of its component parts.

Another purpose is for a plate in suitable material (aluminium, plastic or some other) to connect and support the structural elements of the chair so as to allow it to be replaced, as and when desired.

These and other aims, which will become apparent below, are achieved by the connection plate, the subject of this invention, which is characterised by the fact that a single configuration of the plate permits the connection and interchangeability of parts such as the legs, the back with its support and the seat of the chair.

The seat is fitted to the plate by means of screws which, by engaging with others, allow the legs to be fastened to the body.

The legs can be changed very easily with legs of different shape, material and size simply by tightening/loosening the fastening screws while keeping, if required, the same seat and the same back.

The connecting plate houses the fulcrum of the pin joint, with a counter-spring which permits the rotation (under pressure) of the integral back support so as to recline the back into the relaxed position.

The bottom edge of the back is grooved to provide a purchase or grip for the fingers when lifting and moving the chair.

Other characteristics and advantages will become apparent from the following description and the attached drawings which illustrate, in schematic form and by way of example, one way to realise the invention.

With reference to these drawings:
FIG. 1 is a front view of the chair;
FIG. 2 is a side view of the chair;
FIG. 3 is a detail of the connection and rotating system for tilting the back support in relation to the plate;
FIG. 4 is a perspective view, from the bottom, of the chair with the plate and the connection of one type of leg;
FIG. 5 is a view from below of the plate illustrating several details of its shape;
FIGS. 5A and 5B are, respectively, longitudinal and cross sections of the said plate.

The connecting plate 1 bears the seat 4, to which it is secured with connecting screws, and the back support arm 3 with the connection described below which, keyed and fastened with screws, bears the back 2.

The legs 5 are fastened with the screws 10 or 12 to the plate 1 and, although they are shown with a rectangular section, any type of section and material (for example tubular steel) can be used instead.

The jointed connection between back support and plate is based on the shape of the said back support 3 with two lateral pins 7 and the connecting plate which bears a recess for each part in which the supports of the pins 7 with their bushings are housed and secured to the plate 1 with screws.

The pins 7 of the support 3 rotate with the support in relation to the plate and the limits of this rotation correspond to the extent of inclination of the back, illustrated in Fig. 2; the said limits are defined on one side by the strike pin 6 for forward rotation and on the other by the striker 8, in the plate, for tilting backwards.

The two spiral compression springs 9, 9' which, when compressed, oppose the backward rotation of the back and therefore the downward movement of the support arm 3, return the back of the chair to its normal position when the pressure of the person seated on the chair is removed. The schematic drawings in FIGS. 5, 5A and 5B illustrate the plate body with the outline of the seat 4.

The seatings 11 house the above-mentioned supports of the connecting and roller pins (fulcrum) of the reclining back support.

The plate 1 is shell-shaped with flat surfaces for fitting the legs and upper ribs to support the seat which is fastened with screws to the threaded seatings, as in 12.

This invention achieves the purposes set by means of a single block connecting plate to which the component parts of the structure, which may be of different shape, design characteristics and materials, can easily be fitted with screws, so as to create a chair fitted with a particularly simple and compact seat-legs-back system, without the problems and complexity of various technical solutions currently employed.

This invention, illustrated and described by way of example, may be extended to all those accessory variations which, as such, fall within its scope.

Claims

1 - PLATE FOR THE CONNECTION OF SEAT, BACK AND LEGS, SPECIFICALLY FOR CHAIRS, characterised by the fact that a single body in aluminium, plastic or other suitable material, by its configuration and structure, connects various types and models of chair leg, seat and back.

2 - PLATE as described in claim 1, characterised by the fact that the legs of the chair and the seat can easily be fitted to the said plate, by means of connecting screws or other suitable fastening devices.

3 - PLATE as described in claims 1 and 2, characterised by the fact that it accommodates in a suitable lower housing the fulcrum of articulation to accomplish the inclination of the back, which is achieved by pins lateral to the back support; the said pins rotate on bushings or bearings in the housing and the rotation is opposed by counteracting springs which act on the bottom edge of the support and return the support and the back to the normal position when the pressure exerted by the seated person is removed.

4 - PLATE as described in claims 1, 2 and 3, characterised by the fact that it has the shape of a profiled convex shell, with lower attachment surfaces for the legs of the chair and a ribbed upper part to strengthen and support the seat.

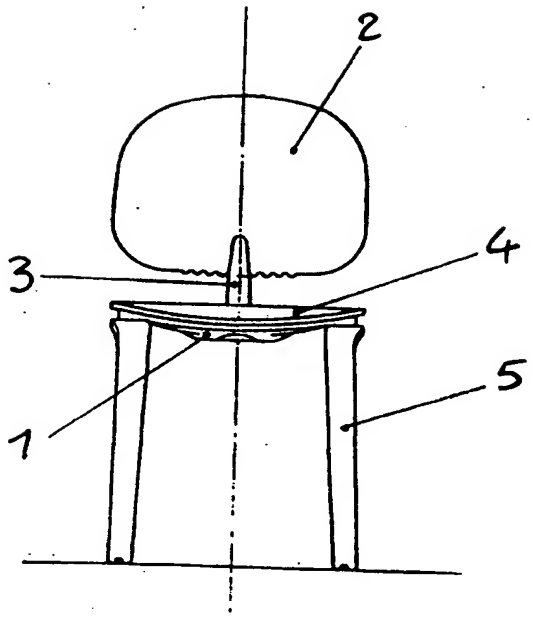

FIG.1

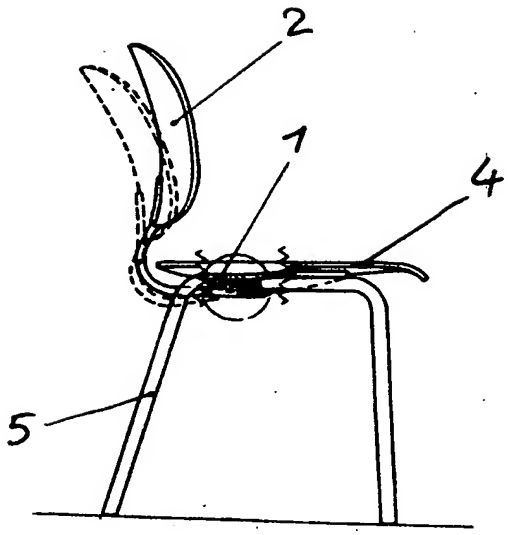

FIG.2

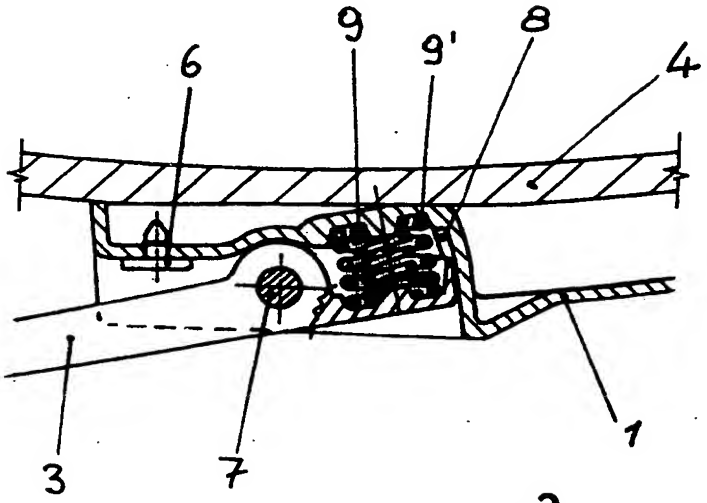

FIG.3

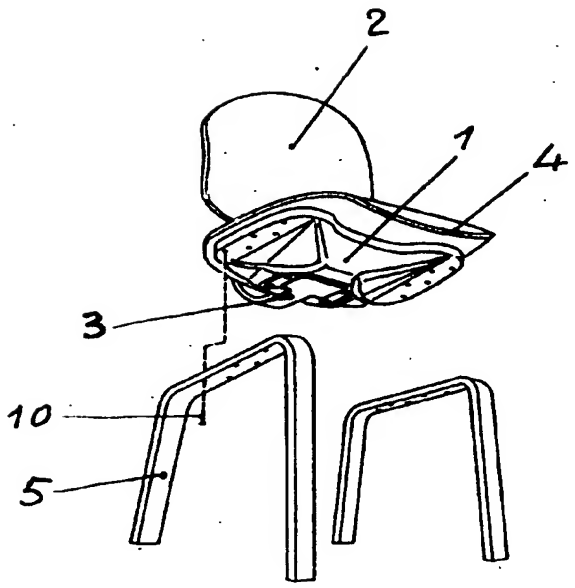

FIG.4

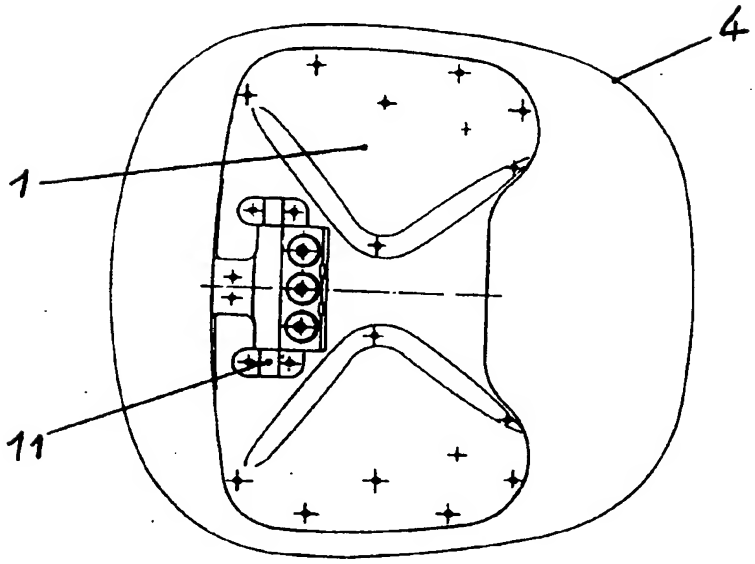

FIG.5

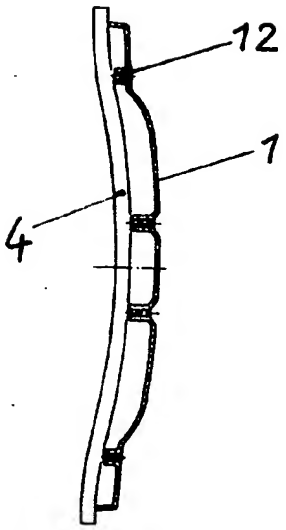

FIG.5a

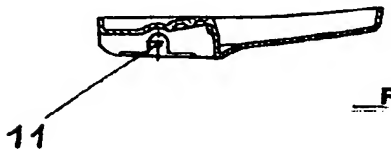

FIG.5b